

I Claim:

1. A method of making an eyeglass capable of compensating low and
2 high order aberrations, the method comprising the steps of:
imaging the patient's eye in order to determine a wavefront
4 prescription;
selecting a first lens;
6 coating said first lens with epoxy; and
curing said epoxy on said first lens to match said wavefront
8 prescription.
2. The method of claim 1 further comprising the steps of:
2 selecting second lens; and
placing said second lens on said coated surface such that said epoxy is
4 sandwiched in between the two lenses.
3. A lens comprising:
2 a constant index of refraction area; and
at least one varying index of refraction area.
4. The lens of claim 3 wherein said varying index of refraction area lies
2 along the optical axis of the patient and corrects higher order aberrations.

Applicant: Andreas Dreher

Invention: Eyeglass Manufacturing Method Using Variable Index Layer

Page: 13

5. The lens of claim 3 formed with a plurality of zones comprising areas
2 of varying index of refraction on the lens, and wherein each zone lies along
the optical axis of the patient for a gazing angle and corrects higher order
4 aberrations for a first discrete gazing angle.

6. The lens of claim 3 wherein said varying index of refraction lies along
2 the optical axis of the patient and corrects higher order aberrations for a first
discrete gazing angle, and wherein said constant index of refraction lies along
4 the said optical axis of the patient and corrects lower order aberrations for a
second discrete gazing angle.

7. The lens of claim 3 wherein said constant index of refraction area
2 corrects for the distant vision, and plurality of zones comprising areas of
varying index of refraction on the lens, each zone corrects for the near vision
4 for the patient.

8. The lens of claim 3 wherein said varying index of refraction is constructed so as to correct higher order aberrations resulting from damaged retinal tissue.